

19. Discuss in detail about the isolation of phosphate solubilizing bacteria.
 20. Elaborately discuss about ecto, endo and ectendo mycorrhizae role in phosphate mobilization with examples.
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NOVEMBER/DECEMBER 2023

**CEMB64A — BIOINOCULANTS
TECHNOLOGY**

Time : Three hours

Maximum : 75 marks



SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What are the PGPR?
2. Comment on Bacteriod.
3. Name any four species of *Rhizobium*.
4. Explain the role of Rhizosphere.
5. Comment on "heterocyst".
6. Define Siderophore.
7. List out any two phosphate solubilizing fungi.
8. Differences between *phosphate solubilizer* and *phosphate mobilizers*.
9. List out any two examples of endomycorrhizae.
10. Comment on VAM.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions

11. (a) Explain in detail about the associative Symbiotic Nitrogen Fixers.

Or

- (b) Explain in detail about Plant Growth Promoting Rhizobacteria.

12. (a) Discuss the about the Rhizobium–legume symbiosis.

Or

- (b) Give an account on non-leguminous crop symbiosis.

13. (a) Briefly explain the role of cyanobacteria in rice cultivation.

Or

- (b) Explain in detail about method of characterization and mass multiplication of *Azolla*.



14. (a) Elaborately explain about the method of field applications of phosphate solubilising mechanism.

Or

- (b) Elaborately discuss about Phosphate Solubilising Microbes and its significance.

15. (a) Elaborately discuss about mass multiplication of VA mycorrhizae?

Or

- (b) Explain the method of quantification and assessment of VAM in roots.

SECTION C — (3 × 10 = 30 marks)

Answer Any THREE questions

16. Elaborately discuss about the taxonomic character, isolation and mass multiplication of *Azotobacter*.

17. Describe in detail about the isolation and characterization of Rhizobium.

18. Elaborately explain the method of field applications of *Azolla* and crop response.